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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

NOV 6 1926

REPORT FOR WEEK ENDING NOVEMBER 6, 1926.

SHERIDAN:

Nice weather prevailed over the most of the week. Plowing of Field C south of the ravine was completed early in the week. Raking and burning of thistles on the rotation field is being completed today.

Maximum temperature 69, minimum 18; precipitation 0.

MANDAN:

Favorable weather during the latter part of the week made it possible to finish up corn husking, which was interrupted by snow and rain last week.

Fruit trees and bushes to be discarded in the breeding blocks and orchards have been dug and piled up to burn. Chokecherries were rather difficult for the tree digger to handle, owing to their suckering habit.

Potatoes are being sorted in the root cellar and those that are frosted removed.

Roses have been covered with soil, and semi-hardy perennials mulched.

Field work, with the exception of mulching fruit trees, is practically completed for the year.

The following shelterbelt tree nursery stock is on hand for spring plantings:-

Northwest poplar	16,700
Green ash	45,870
Boxelder	9,640
Caragana	80,260
Russian olive	4,287
Chokecherry	1,220
Chinese elm	690

The shortage of the total number of trees needed for accepted 1927 plantings, which require 160,230, will be made up by the use of native cottonwood and boxelder seedlings obtained from native stand along the Missouri and Yellowstone Rivers. In addition to the hardwood trees there will be about 20,000 conifers available for planting next spring.

Maximum temperature 63, minimum 17; precipitation .08 inch.

ARDMORE:

The larger fields of fallow were cultivated with the duckfoot cultivator the first part of the week. Brome and wheat grass plats in the Dairy pasture rotation were top dressed with manure. The gasoline and kerosene pumps were set up and are now ready for operation.

Some time was spent in looking for yearling steers for the winter feeding and grazing experiments.

The force of men employed at the station was reduced to those who will be here all winter.

Maximum temperature 61, minimum 16; precipitation 0.

Total precipitation for the month of October, 1.26 inches.

NORTH PLATTE:

Corn from the D. L. A. plats has been weighed up and shredded during the week. Milo from the rotation plats and grain sorghum varieties were threshed. This removes the last of the crops from the experimental fields.

Corn yields were very poor. The average yield of 78 plats was 178 pounds of stover and 16 pounds of ears.

Grain yields ranged from nothing on several plats to 27.3 bushels per acre on the summer tilled plat.

Extremely dry conditions continue. Winter wheat on fallow has made a good growth and is well matted down. On early plowing the stands are fair. On corn ground, about one-third of the stand has perished. On late plowing and disking, there are practically no plants at all. Emergence was slight and the plants which came up have died.

HAYS:

There is but little of interest to report at this station, at this time. The temperature has ranged between a minimum of 16 and a maximum of 79 degrees. Drought has continued with a cloudless sky. The weather has been fine, however, for all kinds of fall work except tillage, which is not very satisfactory on account of the dry and hard condition of the soil, although the station has done considerable listing with a three-bottom lister drawn by a tractor. The ground turns very cloddy.

Hays, continued:

Winter wheat is beginning to suffer of drought on all methods of preparation, but least on fallow, early fall plowing and listing where the ground was packed and worked down early. Generally late worked ground is in bad condition. The light freezes have been hard on the wheat, although most of it will recover if moisture comes soon.

DALHART:

The weather has been very favorable for field work during the entire week. The days have been clear most of the time and the temperature high enough for comfort. The nights have been cold. One small snow was recorded netting .10 inch. This was not sufficient to halt field work.

Today, the 6th, winds up the harvesting of all crops except cotton. The increase fields for seed are all finished. The cotton has considerable open cotton at this time but more that will open as soon as the bolls dry out from the freezes.

Nothing was threshed during the week as the entire time was spent in heading the increase fields, nursery, and in shucking the increase on field corn.

The fruit trees and grape canes are being wrapped for protection against rabbit damage.

The rabbits are somewhat thinned out around the station since the shooting of last week. Another effort was made this week at shooting them by car-light. In the round of about two hours only 25 rabbits were killed that were accounted for. The ones that are included in this count are those that were actually killed and picked up. There were several that were wounded that got across the fence into an adjoining field. They were considerably thinner than in the other rounds. The small grain plats will be fenced against rabbits just as soon as possible.

Maximum temperature 68, minimum 21; precipitation .10 inch-snow.

TUCUMCARI:

Fog, dew, and cloudiness, which have prevailed until nearly 10:00 a. m. nearly every day of the past week, have prevented full time field labor. Early of mornings the grapes and all small shade and fruit trees on the station have been wrapped with woven wire to prevent rabbit damage.

Tucumcari, continued:

All kafir remaining for seed selection was headed, peanuts were harvested, cotton was again picked, and some reshocking was done, this work being performed after plants dried off. The last sampling of moisture tests was made and today, the 6th, it was possible to again start the separator and thresh 14 plats.

Wind velocity has been low and the weather has been so cool the past week, with much cloudiness, that heads were unusually slow in drying after the showers of a week ago. It is probable that threshing can be pursued steadily next week if no moisture falls.

Wheat and rye on the station are growing unusually rapidly, while wheat on the plains section of the county never was better at this time of year.

Maximum temperature 68, minimum 28; precipitation .05 inch.
Average hourly wind velocity, 3.1 miles.

WOODWARD:

On November 2 the temperature went down to 26°, and on the 4th down to 25°, giving our first period of temperatures cold enough to kill sorghum crops and the leaves of deciduous trees. The weather of the week otherwise may be characterized as cool, dry and quiet.

The work of the week has consisted almost entirely of threshing sorghum plats and finishing up odds and ends of harvesting sorghums and cotton.

Maximum temperature 70, minimum 25; precipitation 0.
Average hourly wind velocity, 6.4 miles.

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NOV 1 3 1926

REPORT FOR WEEK ENDING NOVEMBER 13, 1926.

HAVRE:

The past six weeks at this station have been very favorable for farming operations. There was only a trace of precipitation during the month of October and temperatures were normal or above. To date, in November, the same weather has prevailed.

Threshing was completed by the first of November. Some of the headed grain, especially that which was threshed too soon after the rain and snow of September, was so wet that it was rejected by the elevators. In fact, there is some of this grain still being marketed.

Cattle and sheep shipments have practically ceased for this fall. Range conditions are generally very good. Feed supplies are average or above.

The irrigated farmers along the Milk River have completed their farm work in very good shape. This section was very badly delayed the first of October. Many of the crops were severely damaged by the frosts of September. The beets were practically all out of the ground by the first of November and the sugar beet factory reports very satisfactory results for the acreage that was in this year. The sugar content was about 2 per cent higher than last year.

The work on the station is in very good shape at this time. Plowing was completed on the irrigated fields. Thirty-five acres of brome pasture was crowned and will be used for continuous hogging down of corn.

The corn has been weighed up and the yields determined on the varieties. Fields of shelled corn are very light for this year. This is one of the driest years since the station started, the precipitation since the first of the year amounting to only 7.58 inches.

HUNTLEY:

The past week has been generally mild but cloudy. Several sprinkles of rain have fallen but only one shower was measurable. A good rain at this time would be of benefit to fall grains which have made an unusually heavy growth this season. On a few plats, where winter wheat and rye have been crowded by volunteer spring grains, the plants look a little dry after a warm or windy day, indicating that the supply of soil moisture is getting low.

Huntley, continued:

Corn fodder has all been hauled and stacked, roads cultivated with the duck-foot and the fall growth of thistles has been raked off of the plats and burned. A strip of miscellaneous plats were duck-footed also to kill out a heavy growth of volunteer wheat. This practically completes the field work for the season.

Maximum temperature 58, minimum 23; precipitation .28 inch.

SHERIDAN:

The weather has continued mild, but with one shower and several traces of precipitation. Station work for the week consisted only in miscellaneous odd jobs, completing the basement around the new well and preparing pens for feeding pigs during the winter.

Mr. W. L. Quayle, of the State Experiment Station, visited the station Monday.

Maximum temperature 62, minimum 23; precipitation .38 inch.

MANDAN:

Agronomy

The past week for the most part has been cool and cloudy, with a few flurries of snow. One day was exceptionally bright and clear.

The field work for the season was completed during the previous week, when corn husking was finished. Seed cleaning still remains to be done.

The season in general was the poorest for crop production since the station started. Production of small grain was very light, grass was short on the prairie, forage crops were light, but corn made a fair yield for the season and produced considerable feed.

Brome grass hay was hauled into the barn during the week, which was stacked in 1922. This hay is in very good condition. It is bright and free from dust and mould.

The fourth Annual State Corn show was held at Bismarck during the week. There were over 600 entries from all parts of the State. The corn was of very high quality for the kind of season that prevailed in most parts of the State. Programs in which addresses of an educational nature were combined with music and other attractions added to the interest taken by the farmers in the show.

Maximum temperature 53, minimum 15; precipitation, Trace.

Mandan, continued:

The precipitation for the period from January 1 to October 31, inclusive, was 10.18 inches. The 50-year mean for the same period is 15.84 inches. During the same period in 1925, the amount was 13.53 inches.

Cooperative Grazing Experiment

Professor Shepperd, of the Agricultural College, is trying to locate steers for the grazing experiment in 1927. The plan is to obtain about 40 high grade Hereford steers along with the samo number of ordinary grade steers.

During the past season, with a very light growth of grass, it is interesting to note that the steers in the 100-acre pasture made the normal gain of about 300 pounds per head. They had plenty of feed in this pasture, and were not short at any time. The gain in the 70-acre pasture was somewhat below normal. This pasture was grazed closer than during any other year since the experiment started. The steers lost some weight during the last 15 days of the season.

Arboriculture

Field work in the shelterbelt project is now finished. 18,000 Northwest poplar cuttings, the smallest number we have ever had, were made up and buried during the week. On account of the unusual shortage of rain during the growing season, growth of cutting stock was much shorter than ordinarily.

The Moccasin Station has sent cutting wood of the native Narrowleaf cottonwood and Balsam poplar, which we will try to root here at Mandan, and send back to Moccasin for placing in testing blocks. A supply of cones from evergreens growing in the Judith Basin was also received.

Measurements of the trees in the test plantings at Mandan indicate that the average annual growth for all species will be very small. This is another evidence of the effect of scant rain fall. A number of willows and poplars did not survive the season.

To offset the growing conditions we have had the best seed year, especially for ash and boxelder, that has occurred since the war. We have succeeded in gathering a two year's supply of these two species, and the seed seems to be of very good quality.

Mandan, continued:

Final figures on the planting stock required for 1927 demonstration plantings, and the stock on hand, show that we are in a much better position that we had estimated in September. While there is no surplus of stock to allow the inclusion of extra trees to take care of replacements the second year, there is enough to make the accepted plantings of a size that will use all of the land prepared for the trees.

Mr. Robert Wilson has been authorized to attend the meeting of the Nebraska Potato Improvement Association at Chadron, Nebraska, December 15, 16, and 17, where he will give a talk, and participate in a discussion of the problems of tree planting in western Nebraska.

Horticulture

Except for mulching strawberries and fruit trees, field work for the year is practically over. Tree protectors have been put on young trees to guard against rabbit injury, seed beds have been mulched, fall planted cuttings covered with soil, and fall pruning of small fruits completed. The trees are now going into the winter in fair condition as far as the soil moisture supply is concerned, and it is hoped there will not be as much winter killing as was the case last winter.

The past season has been an interesting one in horticultural work. The open dry winter, and continued dry weather in the spring, resulted in the killing or partial killing of many trees and shrubs, but gave considerable data on the ability of the several varieties to withstand such conditions. No killing frost occurred during blooming time, but the dry spring weakened some of the trees to such an extent that they set little or no fruit. In general, apples and crabs yielded fairly well. Nigra and Japanese X Americana varieties of plums did very well, while Americana and plum-sandcherry hybrids did not bear as heavily as usual. The dry spring was unfavorable to most small fruits. Strawberries and gooseberries were almost failures, and raspberries gave low yields. Currants, however, did fairly well, and native golden currants bore good crops of fruit. Juneberries set a heavy crop of fruit, but many of the berries dried up on the bushes, and the quality was generally poor. Sandcherries were inclined to be small, bitter, and poor in quality.

New selections of the different kinds of fruit were made in the breeding blocks, some of which appear to be very good. A few of the best selections were propagated to sent out to fruit cooperators.

ARDMORE:

Rain and snow totaling over an inch of water on November 6 and 7 kept the ground muddy and the roads in bad condition during the entire week. Another rain fell on October 13.

Work was confined to general repairs and other inside work. Maximum temperature 60, minimum 15; precipitation 1.43 inches.

ARCHER:

On the whole the fall has been favorable for field work. The precipitation for September was .46 of an inch, for October .83 of an inch and to date in November a trace. These amounts of precipitation have for the most part been distributed over long periods of time and have been more in the nature of flurries than of storms. These conditions have been of aid in the accomplishment of fall work. However, the dryness of the fall is apt to be rather far reaching in its effect on certain crop and native vegetation.

Fields seeded to winter wheat, which were not properly fallowed are beginning to show severe effects of this drought. Winter wheat and rye seeded in stubble has sprouted, but unless more moisture is secured it may die. It is expected that the native vegetation will be later in starting in the spring. The trees and shrubs on dry-land will be given a severe test. The early severe frost of September 23 to 24 killed all this year's growth of peach trees and most of it on apricots. Most of the new plums succumbed. Some trees are proving hardy.

The early frost indirectly injured the winter wheat crop at the station in that the sudden disappearance of all green vegetation caused the rabbits to concentrate their efforts for existence upon this crop. Practically all the green leaves were eaten to the ground. It happened that a band of coyotes came into action and gave some relief.

Most of the crop work is done. There remains a few potatoes to sort and stray ears of corn to gather in the experimental field where the crop was cut for silage. Considerable repair work is being done to the machine shed and horse barn. This consists mostly in changing doors and walls.

All feed for the dairy has been stored at the station except the cottonseed meal which should arrive soon. The hauling of the winter's supply of coal will complete the heavy outside work.

Archer, continued:

The average yield of corn is about 10 bushels per acre. Very few ears were mature enough to withstand the late September frost, hence seed corn in this section is out of the question unless gathered before the frost. The station force had just picked sufficient for station needs and had properly stored it when the frost occurred.

NORTH PLATTE:

A light rain and snow occurred early in the week. Since then there has been considerable cloudiness, with low temperatures. The ground remained frozen, interrupting irrigation operations until yesterday. The irrigation pump was run most of the time from October 20 to November 6, irrigating land for next year's crop.

The rainfall deficit reported by the North Platte Weather Bureau was 4.23 inches at the end of October. The deficit at that time last year was 7.72 inches. On account of unfavorable distribution this year was much less favorable than last for the development of crops.

COLBY:

The first week in November was almost ideal, perhaps a little too dry to suit us. This week started out with a blizzard Sunday night and Monday morning. About an inch of snow fell, but most of the ground was left bare by the hard wind that accompanied the snow. Considerable damage was done to light and telephone poles in this section of the station by the wind and snow. The rest of the week was cold and threatening.

The work on the station consisted mostly of routine work in connection with the dairy. The dairyman was shut in for over a week with the measles, and the teamster with a badly infected hand. This left the writer alone on the place able to be on the job. The dairyman is able to be up and around some now, and it is hoped that the teamster will be able to be out the first of the week.

The M. C. E plats of milo and corn were plowed and subsoiled on November 1.

Maximum temperature 72, minimum 14; precipitation .10 inch--in the form of snow.

HAYS:

The most important item of interest for this station during the week was the fall of a little moisture. The monotony of the drought was broken by .68 inch moisture which fell during the night of the 7th and morning of the 8th, .60 inch in the form of rain and .08 inch in the form of snow. While this rain was too small to penetrate deeply it brought temporary relief to the wheat, a great deal of which was suffering much from drought. The rain and snow was accompanied by some low temperatures, but it has since warmed up, and the wheat fields look very much more promising than before the rain. Today, November 13, it is cloudy, dark, and very damp,- prospects good for more moisture.

The field work on the station now is largely with feed crops. At present the station is filling silos with sorghums from which the heads have been removed. It might be added there are many bundles that were headless; however, where there was grain worth while it has been removed.

GARDEN CITY:

A snow storm last Monday prevented field work during the week. Only .16 of an inch of moisture was received in the form of snow. It was accompanied by a wind which averaged 28 miles an hour for 25 hours. Most of the snow drifted into roadways and fence rows. Not enough of it stayed on the wheat fields to do any good to that crop. Since the early freezes wheat has made practically no progress. Some fields may be seen that look quite promising, but for a great part wheat looks bad.

If no more moisture is received sorghum threshing will be done next week.

Maximum temperature 77, minimum 18; precipitation .16 inch.

DALHART:

Most of the past week has been favorable weather. Sunday was quite windy, cloudy and cool. Monday was a beast of a day. The wind blew all day out of the north, making around 25 to 30 miles per hour during the entire day but calmed down at night. Considerable damage was done over the Panhandle during this wind. The remainder of the week has been ideal weather.

The threshing of experimental plats is all finished. There will be several days of threshing of increase fields before the threshing of the season is all over. This will be finished next week if conditions will permit.

Dalhart, continued:

None of the bundle feed has been hauled in from the plats and weighed as yet but some of it is ready to weigh. The later harvested plats are too sappy to get accurate weights on at this time. The cotton has dried out considerably this week due to the heavy winds. There was no loss of cotton from blowing out of the bolls since it had been picked closely as it opened.

Most of the small grain plats were fenced this week for protection against rabbits. The remainder will be fenced as soon as possible the first of the week. The small grains stood the wind the first of the week in good shape. None of the plats were damaged by blowing.

Maximum temperature 74, minimum 15; precipitation 0.
Average hourly wind velocity, 6.9 miles.

TUCUMCARI:

Precipitation this year has totaled 18.51 inches, compared with a 21-year average of 16.34 inches for the same period. April, May and June were unusually wet, while all other months were below the average. Crop yields will not, as a rule, far exceed the long time average, in spite of the higher than usual rainfall. Much of the 5.25 inches received in May came in torrential downpours, causing washing, and thus did not give much aid toward crop production.

Wind velocity throughout most months was lower than usual, while mean temperatures have averaged slightly lower than for the 21-year period, although individual months have been unusually high or low, as the case might be. Eveporation has been about 10 per cent lower than the long time seasonal average.

Ranges are in good condition, calves are selling from $25 to $30 per head, a better price than has been received in several years, and crops over the eastern portion of the state will average better than usual. Prices of heads and threshed grain are low, in many cases hardly paying the labor of heading and hauling to market. With an abundance of sorghum roughage and sorghum grain, the farmer who is attempting to diversify is in much better condition than the one who is expecting to receive his year's income from headed or threshed sorghum put on the market. Wheat is making good growth and is in much better condition than usual, due to early seedbed preparation and early seeding.

Tucumcari, continued:

Some threshing was done during the week, while the remaining baskets of heads, about 225 in number, were hauled to the machine shed. Rain or snow will now delay threshing only during the period of the storm. Extremely windy weather has prevented threshing two days of the week and this time was spent in hauling baskets, fanning grain, and repairing machinery. Rotation milo plats threshed to date have averaged 30.4 bushels, while kafir plats have averaged 6 to 8 bushels lower.

Completion of cotton picking; hauling of the remaining increase sorghums and plat stover; fall plowing; and completion of plat, increase, and seed threshing should be completed early next month, if not by the close of November.

Maximum temperature 79, minimum 20; precipitation 0.
Average hourly wind velocity, 5.4 miles.

BIG SPRING:

Weather conditions during the past two weeks have been cloudy and damp. Although only a small amount of moisture was received, there was just enough to make the sorghums too tough to thresh. On the night of November 8 the first frost of the season occurred; at this time the thermometer dropped to 25. All plats had been harvested with the exception of the third cutting of Sudan in the rotations and the early dates, and the later maturing peanut varieties. These were harvested the day following the freeze.

Threshing was started on November 12, but the sorghum heads seem to be too tough to thresh well. A beaver board ceiling was put up in one of the rooms of the teamster's cottage; this was used in place of the old plaster, which had started to fall off.

Maximum temperature 79, minimum 25; precipitation .32 inch.

LAWTON:

The first killing frost of the season came on the night of November 4 and several hard freezes have occurred at subsequent dates. November 4 is about the normal fall date for frost.

Clear weather has continued throughout November and farm work continues as rapidly as possible. The last of the harvesting was completed November 6. Grain sorghums planted July 2 were mostly in the hard dough stage and those planted July 15 reached only the milk to soft dough stage of development.

Lawton, continued:

The last picking of cotton has been under way for some time and will likely be completed within the next ten days if the weather permits. The picking is tedious because of the rotted burrs. Practically all of the cotton coming to the gins at present is "snapped". Threshing of sorghum crops was begun November 13. Strong winds, changing direction frequently, retard the work somewhat.

Practically no fall plowing for spring crops has been done throughout the county. Because of the low price of cotton a great many farmers are employing as little help as possible and fields still remain white. It is estimated that much cotton will remain to be picked by Christmas time even with good weather from now on. In all probability a considerable amount of the crop will be wasted in the field. High winds the past week have blown lots of it onto the ground where it damages very rapidly. A wind velocity of 20 miles per hour continued throughout one day during the week.

The earlier seedings of wheat and barley have made good growth and furnish much fall pasture. The acreage of both crops is large. Quite an appreciable acreage, however, has been seeded rather late.

WOODWARD:

Work in the field was made impossible over most of the week by sleet and snow which fell Sunday and Monday, totaling .78 inch precipitation. This no doubt was of considerable benefit to wheat, especially in hurrying it toward pasturing stage. It made roads over three or four days almost impassible.

Work of week has consisted in threshing plats already stored in the shed, fanning all plats previously threshed, in fencing and in hauling sand.

Maximum temperature 78, minimum 25; precipitation .78 inch.
Average hourly wind velocity, 10.5 miles.